Work Order ID 57447

April 7, 2010 9:53:19 AM

Item ID: D105-674-011G **Accept** **Setup Start**

Revision ID: **Stop**

Item Name: Skidtube, Grey

Start Date: 07/04/2010 **Start Qty:** 1.00 **Cust Item ID:**

Required Date: 16/04/2010 **Req'd Qty:** 1.00 **Customer:**

Reference:

Approvals: **Process Plan:** ___ **Date:** 10-4-07 **Tooling:** ___ **Date:** ___ **Run Start**

QC: ___ **Date:** ___ **SPC (Y/N):** ___ **Date:** ___ **Stop**

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	**Revision Nbr**								
D2966	Rev A2								
100	DOCUMENT CONTROL	0.00							
DC	**Memo**	0.00							
Document Control	Photocopy bluefile & type labels per PPP		D105-674-011G		CHG002				
110	Skidtubes	0.00							
Skidtubes	**Memo**	0.00							
Skidtubes	1-Determine square end of tube and deburr 2-Drill #30 pilot holes using DT8678. Open holes to Ø5/16" (0.313"). Deburr holes.								
120	BENDING MACHINE - SKIDTUBES	0.00							
CNC Bend 1	**Memo**	0.00							
CNC Delta 100 Bender	Bend tube as per program BO105 on CNC Bender and Dwg D2966. ~~Use 5/16" locator pin on buggy "A".~~								

for BG 10/06/17

S 10/06/18

DP 10-6-2

as per Folio 1

DP 10-6-2

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

H:\fFORMS\Quality Assurance\approved QA\NCRWO RevE

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Run Start

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Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

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Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130	Skidtubes	0.00							
Skidtubes									
Skidtubes	**Memo**	0.00							

1-Cut Fwd end of the tube using DT8185-1
2-Cut Aft end at 107.06" using DT8185D
3-Deburr ends
4-Drill Aft Cap holes using DT8678
5-Locate DT8679 with 1/8 clecos in Aft Cap holes. Ensure DT8679 is centered on Fwd end of tube and drill #40 Fwd bushing.
6-Clamp DT8679 to the tube. Drill all #30 wearplate and crossbolt holes.
7-Open Aft Cap holes using #6 drill
8-Open wearplate holes and two side holes to Ø19/64" (0.297") as per Dwg D2966-1.
9-Deburr holes.
10-Open remaining (16) crossbolt holes to Ø0.500

DP 10-6-2

140	Skidtubes	0.00				1		BE 10/06/03	
Skidtubes	**Memo**	0.00							

1-Weld Fwd Cap as per Dwg D2966 and QSI 004. Fill #40 Fwd cleco hole. A/R M114242
2-Grind Fwd Cap welds flush

DP 10-6-3

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

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NOTE: Date & initial all entries

H:\fFORMS\Quality Assurance\approved QA\NCRWO RevE

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Reference:

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____ **Run Start** **Stop**

QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150	QC10- Inspect visual per QSI004- ground welds	0.00	S 10/06/03						
QC	Memo	0.00							
Quality Control									
160	QC5- Inspect part completeness to step on W/O	0.00	S 10/06/03			(4)			
QC	Memo	0.00							
Quality Control									
170	Chemical Conversion Coat per QSI005 4.1	0.00				10-6-3			
HandFinish	Memo	0.00							
Hand Finishing									

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

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QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Run Start

Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
180	QC3- Inspect Part Finish	0.00							
QC						1	M	10/06/03	
Quality Control	**Memo**	0.00							
190		0.00							
Skidtubes	Skidtubes								
Skidtubes						M	10/06/03		
	Memo	0.00							

1-Open crossbolt holes to finish size as per Dwg D2966
2-Open 14 holes to Ø0.750" & 2 holes to Ø0.875", countersink crossbolt holes & remove alodine to prepare for welding as per Dwg D2966
3-Deburr holes inside & outside, blow out chips

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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H:\fFORMS\Quality Assurance\approved QA\NCRWO RevE

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Required Date: 16/04/2010 **Req'd Qty:** 1.00
Reference:

Accept

Setup Start
Stop

Cust Item ID:
Customer:

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____
QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Run Start
Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
200		0.00							
Skidtubes	Skidtubes								
Skidtubes	**Memo**	0.00							

1-Bond Web in place per QSI 015. (Ensure holes line up)
Pick:
Qty☐Part Numbe ☐Description☐Batch
A/R☐☐Sikaflex-291☐ M11345 ☐☐
Sikaflex expiry date :☐ 10/11/10

M 10/06/03

2-Weld Crossbolt Spacers as per Dwg D2966 and QSI 004. For crossbolt spacer, weld one side, pass 5/8" drill; weld other side, pass 5/8" drill.
Pick:
Qty☐Part Number ☐Description☐Batch
A/R☐☐Aluminum Rod☐ M114242 BE 10/06/07

3-Pass Ø0.630" drill to remove spillover for D2973 crossbolt. Pass Ø0.750" drill to remove spillover for D2971 crossbolt. BE 10/06/07

4-Grind welds flush as per Dwg D2966 DP 10-6-8

210	QC10- Inspect visual per QSI004- ground welds	0.00							
QC	**Memo**	0.00							
Quality Control									

8 welds

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Reference:

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____ **Run Start**

QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____ **Stop**

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
220 QC Quality Control	QC5- Inspect part completeness to step on W/O	0.00							
	Memo	0.00 Solo6/08				50			
	RE-ALODINED PAR09-043								
230 Powdercoat Powder Coating	Grey Sandtex(Ref:4.3.5.6) per QSI005 4.3 M11258	0.00							
	Memo START TIME: 2:00PM OVEN TEMPERATURE: 320°C FINISH TIME: 2:30pm	0.00 JH 10/06/10				1			
240 QC Quality Control	QC3- Inspect Part Finish	0.00							
	Memo	0.00							

1 BR 10-6-10

ml 10 06 15 (1)

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

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H:\fFORMS\Quality Assurance\approved QA\NCRWO RevE

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Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
250	HandFinishing	0.00				ml	10	02	16 (1)
HandFinish	**Memo**	0.00							
Hand Finishing	1-Inspect for foreign objects as per QSI 024 2-Install Inserts, Wearplate and Cap per Dwg D2966. Insert a drop of sikaflex at insert holes before installing wearplates. Seal Aft Cap using Sikaflex. Install bushing and nut. By looking Fwd, install nut to right hand side. Pick: Qty□Part Number□Description□Batch A/R□□Sikaflex-291□ AH093 □ Sikaflex expiry date:□ 10/2010 3-Wing Walk as per Dwg D2966 and QSI 005 4.4□ Batch: 114432 ml 10-06-17 (1)								
260	QC3- Inspect Part Finish	0.00				S 10/06/17			
QC	**Memo**	0.00							
Quality Control									

Dart Aerospace Ltd

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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Reference:

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Setup **Start**
Stop

Cust Item ID:
Customer:

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____
QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Run **Start**
Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
270 QC Quality Control	QC5- Inspect part completeness to step on W/O	0.00							
	Memo ******ENSURE INSERT ARE AT LOCATION (6) AS PER DWG D2966******	0.00							
280 Packaging Packaging	Pick Kit	0.00							
	Memo	0.00							
290 QC Quality Control	QC4- 100% Inspect kits for completeness	0.00							
	Memo	0.00							

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Reference:

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QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____ **Stop**

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
300		0.00							
Packaging	Packaging								
Packaging	**Memo**	0.00							
	Identify and pack for shipping as per PPP D105-674-011G Location: 81								
310	QC21- Final Inspection - Work Order Release	0.00							
QC	**Memo**	0.00							
Quality Control									

Rec A

10-6-21

10/06/21

MF 10-6-21

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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H:\fFORMS\Quality Assurance\approved QA\NCRWO RevE

Picklist Print

April 7, 2010 9:53:24 AM

Work Order ID: 57447

Parent Item: D105-674-011G

Parent Item Name: Skidtube, Grey

Comments: IPP Rev:A□04.07.07□New Issue□KJ/JLM

Start Date: 07/04/2010 **Required Date:** 16/04/2010

Start Qty: 1.00 **Required Qty:** 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D2962-125 Outer Tube Extrusion		Manufactured	No			110	Each	31.0000	1.0000			
				Warehouse Location		**Loc Qty**		**Loc Code**				
				Main Warehouse								
				HALL		31						
				17532		31						
D2964 Cap		Manufactured	No			140	Each	24.0000	1.0000			
				Warehouse Location		**Loc Qty**		**Loc Code**				
				Main Warehouse								
				LG		24						
				14101		24				1	BE	12/06/03
D2976 BO 105 Skidtube I Beam		Manufactured	No			200	Each	0.0000	1.0000	B57541	1 M	10/06/03
D2971 Cross Bolt Spacer		Manufactured	No			200	Each	32.0000	1.0000			
				Warehouse Location		**Loc Qty**		**Loc Code**				
				Main Warehouse								
				LG		32						
				44445		32				1	BE	10/06/07

DP 10-6-2

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Comments: IPP Rev:A□04.07.07□New Issue□KJ/JLM

Start Date: 07/04/2010 **Required Date:** 16/04/2010

Start Qty: 1.00 **Required Qty:** 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D2973 Cross Bolt Spacer		Manufactured	No			200	Each	187.0000	7.0000			
				Warehouse Location		**Loc Qty**		**Loc Code**				
				Main Warehouse								
				LG		187						
				14636		187				7	BE 10/06/07	
D2965 Cap, 105 Skidtube		Manufactured	No			250	Each	49.0000	1.0000			
	B# 59600			**Warehouse Location**		**Loc Qty**		**Loc Code**			MA 10·06·16	
				Main Warehouse								
				FP4		49						
				52057		49						
D2970-1 Wearplate		Manufactured	No			250	Each	23.0000	1.0000			
				Warehouse Location		**Loc Qty**		**Loc Code**			MA 10·06·16	
				Main Warehouse								
				FP		23						
				43726		7						
				48213		16						

Dart Aerospace Ltd

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Work Order ID: 57447

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Parent Item Name: Skidtube, Grey

Comments: IPP Rev:A□04.07.07□New Issue□KJ/JLM

Start Date: 07/04/2010 **Required Date:** 16/04/2010

Start Qty: 1.00 **Required Qty:** 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D2970-3 Wearplate		Manufactured	No			250	Each	20.0000	1.0000			
				Warehouse Location		**Loc Qty**		**Loc Code**			10·06·16	
				Main Warehouse								
				FP			20					
					43727		4					
					48214		16					
D3176-1 Bushing		Manufactured	No			250	Each	15.0000	1.0000			
				Warehouse Location		**Loc Qty**		**Loc Code**			10·06·16	
				Main Warehouse								
				ST041			15					
					37586		15					
D3176-3 Nut		Manufactured	No			250	Each	23.0000	1.0000			
				Warehouse Location		**Loc Qty**		**Loc Code**			10·06·16	
				Main Warehouse								
				ST041			23					
					37585		3					
					44896		20					

B# 35627

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Comments: IPP Rev:A□04.07.07□New Issue□KJ/JLM

Start Date: 07/04/2010 **Required Date:** 16/04/2010

Start Qty: 1.00 **Required Qty:** 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
ALS7-1032-130		Purchased	No			250	Each	575.0000	36.0000			
Insert												
				Warehouse Location		**Loc Qty**		**Loc Code**				
				Main Warehouse								
				ST282		575						
				113238		575						
MS27039-1-08		Purchased	No			250	Each	1,958.000	26.0000			
Screw												
				Warehouse Location		**Loc Qty**		**Loc Code**				
				Main Warehouse								
				ST291		1958						
				110552		44						
				110835		1914						
~~AN960JD10L~~		Purchased	No			250	Each	4,691.000	28.0000			
Washer												
				Warehouse Location		**Loc Qty**		**Loc Code**				
				Main Warehouse								
				ST348		4691						
				110985		4691						

B# 114654

AN960JD10L

10-06-16

10-06-16

10-06-16

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

H:\fFORMS\Quality Assurance\approved QA\NCRWO RevE

Picklist Print

April 7, 2010 9:53:24 AM

Work Order ID: 57447

Parent Item: D105-674-011G

Parent Item Name: Skidtube, Grey

Comments: IPP Rev:A□04.07.07□New Issue□KJ/JLM

Start Date: 07/04/2010 **Required Date:** 16/04/2010

Start Qty: 1.00 **Required Qty:** 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
MS27039-1-09		Purchased	No			250	Each	479.0000	2.0000			
Screw												

Warehouse Location	Loc Qty	Loc Code
Main Warehouse		
ST291	479	
111650	444	
18057	35	

10-06-16

D2972		Manufactured	No			290	Each	111.0000	6.0000			
Bushing												

6

10-6-18 SP

Warehouse Location	Loc Qty	Loc Code
Main Warehouse		
ST032	111	
33544	80	
44160	31	

6

D2974		Manufactured	No			290	Each	9.0000	1.0000			
Packer												

5

10-6-18 SP

Warehouse Location	Loc Qty	Loc Code
Main Warehouse		
ST032	9	
42715	9	

1

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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Comments: IPP Rev:A□04.07.07□New Issue□KJ/JLM

Start Date: 07/04/2010 **Required Date:** 16/04/2010

Start Qty: 1.00 **Required Qty:** 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D2975 Wearshoe		Manufactured	No			290	Each	13.0000	2.0000	1	10-6-18	

Warehouse Location	Loc Qty	Loc Code
Main Warehouse		
ST497A	13	
41443	1	
44894	12	

AN4-51A Bolt		Purchased	No			290	Each	186.0000	3.0000	M149941	10-6-18	

Warehouse Location	Loc Qty	Loc Code
Main Warehouse		
ST361	186	
112720	50	
113121	100	
113226	36	

AN960JD10L Washer		Purchased	No			290	Each	4,691.000	8.0000	1	10-6-18	

Warehouse Location	Loc Qty	Loc Code
Main Warehouse		
ST348	4691	
110985	4691	

Put 20 Back in stock

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Picklist Print

April 7, 2010 9:53:24 AM

Work Order ID: 57447

Parent Item: D105-674-011G

Parent Item Name: Skidtube, Grey

Comments: IPP Rev:A□04.07.07□New Issue□KJ/JLM

Start Date: 07/04/2010 **Required Date:** 16/04/2010

Start Qty: 1.00 **Required Qty:** 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
MS21042L4 Nut		Purchased	No			290	Each	1,590.000	3.0000	M114523	10-6-18 SP	

Warehouse Location	Loc Qty	Loc Code
Main Warehouse		
ST139	2	
111827	2	
Main Warehouse		
ST300	1588	
113422	580	
114108	1000	
9063	8	

MS27039-1-08 Screw		Purchased	No			290	Each	1,958.000	8.0000	10-6-18 SP		

Warehouse Location	Loc Qty	Loc Code
Main Warehouse		
ST291	1958	
110552	44	
110835	1914	8

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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DESIGN	DRAWN BY	DART AEROSPACE USA, INC. BELLEVUE, WA
RF	RF	
CHECKED	APPROVED	DRAWING NO. D2966 — REV. A — SHEET 1 OF 2
DATE 00.03.08		TITLE BO 105 SKIDTUBE ASSEMBLY — SCALE NTS
A	00.03.08	NEW ISSUE

RELEASED 00.05.11

Qty	Part Number	Description
X	D2966-041	SKIDTUBE ASSEMBLY
1	D2962-125	EXTRUSION
1	D2964	CAP
1	D2965	CAP
1	D2970-1	WEARPLATE
1	D2970-3	WEARPLATE
1	D2971	CROSS BOLT SPACER
7	D2973	CROSS BOLT SPACER
1	D2976	WEB
36	ALS7-1032-130 or ALS4-1032-130 or AKS7-1032-130 or AKS4-1032-130	INSERT
28	AN960JD10L	WASHER
26	MS27039-1-08	SCREW
2	MS27039-1-09	SCREW
1	D3176-1	BUSHING
1	D3176-3	NUT

A2

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 574417
10-4-07

GENERAL NOTES:

1) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
2) WELDING TO BE DONE PER DART QSI 004.
3) INSERT D2976 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241/ -291 ADHESIVE PER DART QSI 015 AFTER BENDING.
4) USE DART DRILL TEMPLATE DT8451 TO LOCATE AND DRILL Ø0.297 HOLES FOR WEARSHOE INSERTS. INSTALL ALS7-1032-130 PER SECTION B-B (34 PLACES) AFTER FINISH. SEAL WEARPLATE SCREWS WITH SIKAFLEX-241/-291.
5) DO NOT INSTALL MS27039-1-08 SCREWS AND AN960JD10L WASHERS IN THESE LOCATIONS.
6) INSTALL ALS7-1032-130 INSERT, MS27039-1-08 SCREW, AND AN960JD10L WASHER IN 2 PLACES THIS LOCATION BEFORE POWDER COATING.
7) FINISH:
   ACID ETCH, ALODINE PER DART QSI 005 4.1 PRIOR TO INSERTING D2976 WEB
   POWDER COAT ASSEMBLY ~~GLOSS WHITE (REF 4.3.5.1)~~ PER DART QSI 005 4.3
   BLACK ANTI-SKID PAINT AS INDICATED TO 1.00 ABOVE CENTER LINE PER DART QSI 005 4.4 (OPTIONAL) BLACK SANDTEX (REF 4.3.5.7) A1
   01.01.29
   01.01.30

A2	02.10.30	ADD D3176-1/-3
A1	01.01.29	CHANGE COLOR TO BLACK SANDTEX

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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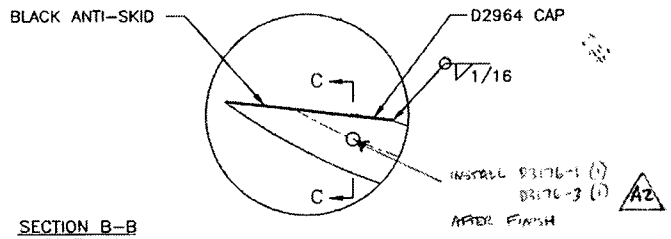
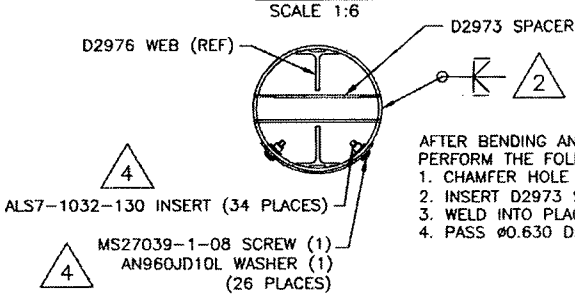
DETAIL A
SCALE 1:3

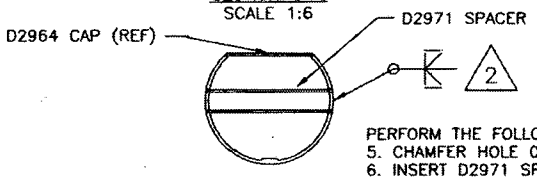


SECTION B–B
SCALE 1:6



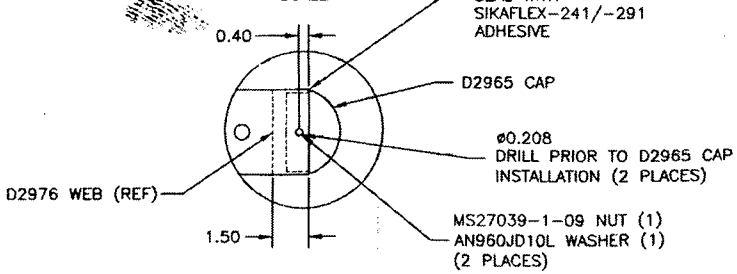
AFTER BENDING AND DRILLING ASSEMBLY
PERFORM THE FOLLOWING FOR ø0.750 HOLES ONLY:
1. CHAMFER HOLE 0.030 x 45°
2. INSERT D2973 SPACER (7 PLACES)
3. WELD INTO PLACE AND GRIND FLUSH
4. PASS ø0.630 DRILL TO REMOVE SPILL OVER

SECTION C–C
SCALE 1:6

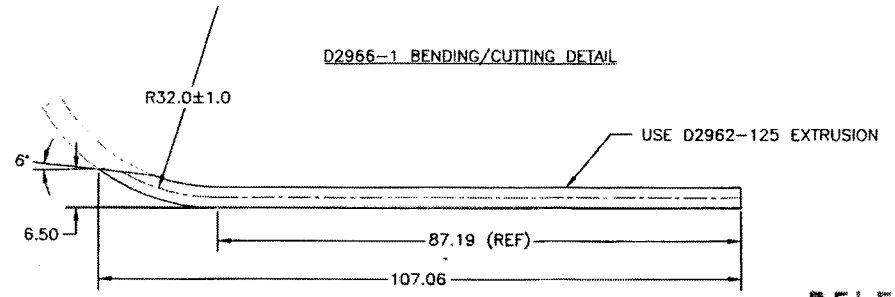


PERFORM THE FOLLOWING FOR ~~ø0.625~~ ø0.875 HOLES ONLY:
5. CHAMFER HOLE 0.030 x 45°
6. INSERT D2971 SPACER
7. WELD INTO PLACE AND GRIND FLUSH
8. PASS ~~ø0.484~~ ø0.750 DRILL TO REMOVE SPILL OVER

DETAIL D
SCALE 1:4

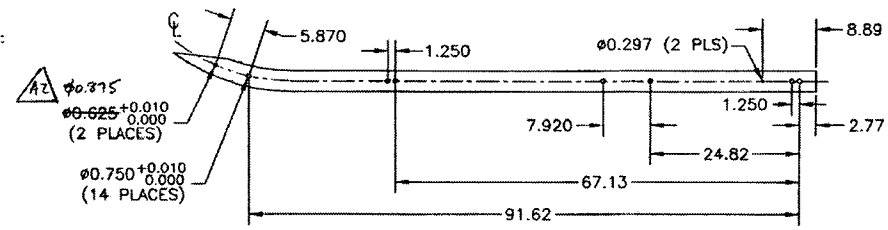


D2966–1 BENDING/CUTTING DETAIL

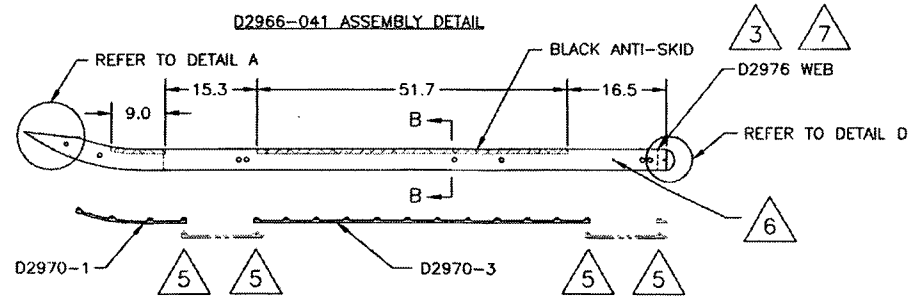


RELEASED
00.05.11

D2966–1 DRILLING DETAIL



D2966–041 ASSEMBLY DETAIL



W/O 574417

DESIGN RF	DRAWN BY RF	DART	DART AEROSPACE USA, INC. BELLEVUE, WA
CHECKED	APPROVED	DRAWING NO. D2966	REV. A SHEET 2 OF 2
DATE 00.03.08		TITLE BO 105 SKIDTUBE ASSEMBLY	SCALE 1:20

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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NO. 192

AWS D17.1.2001
QUALIFICATION TEST RECORD

Name: Barclay Elliot
Job number: 44849
Part number: D105 604 011 WC
Description: BO 105
Welding Process: Tig[✓] Mig[ ]
Base materiel: Aluminium
Current: AC[✓] DC[ ]

TEST REQUIREMENTS AND RESULTS

Visual:	pass[✓]	fail[ ]
Penetration:	pass[✓]	fail[ ]

UNACCEPTABLE

Cracks:	pass[✓]	fail[ ]
Undercut:	pass[✓]	fail[ ]
Pin holes:	pass[✓]	fail[ ]
Overlap (cold lap)	pass[✓]	fail[ ]
Porosity (surface):	pass[✓]	fail[ ]
Coloration:	pass[✓]	fail[ ]

Qualifier Pat Dwal **Date of Test Coupon** 09-02-05

Welder Barclay Elliot **Date of Test Coupon** 09-02-05

The above named individual is qualified in accordance with AWS D17.1.2001 to weld

REFERENCE ONLY

32.3 WEIGHT AND BALANCE:

The following weight and balance information is for Dart skidtube installations only. The weight and balance of the skidtube installations that are being removed from the aircraft are the responsibility of the installer.

		LONGITUDINAL		LATERAL	
Installation	Weight	Arm	Moment	Arm	Moment
D105-674-011 SKIDTUBE INSTALLATION	19.3 lb 8.8 kg	103.9 in 2.6 m	2005.3 in lb 22.9 m kg	± 47.3 in ± 1.2 m	± 912.9 in lb ± 10.6 m kg

32.4 PART LIST

Item	-011	-041	Part Number	Description
	X		**D105-674-011**	**SKIDTUBE INSTALLATION**
	1	X	**D105-674-041**	**REPLACEMENT SKIDTUBE**
1		1	D2966-041	SKIDTUBE ASSEMBLY
2	4		105-50301	** CLAMP
3	8		LN9380M8X45	** BOLT
4	8		LN9023B8-1.4544.9	** LOCKING WASHER
5		1	D2965	* AFT CAP
6		2	MS27039-1-09	* SCREW
7		2	AN960JD10L	* WASHER
8		1	D2970-1	* WEARPLATE
9		1	D2970-3	* WEARPLATE
10	1		D2974	PACKER
11	2		D2975	WEARPLATE
12		34	AKS7-1032-130	* INSERT
13	8	26	MS27039-1-08	* SCREW
14	8	26	AN960JD10L	* WASHER
15		2	AKS7-1032-130	* INSERT
16		2	MS27039-1-08	* SCREW
17		2	AN960JD10L	* WASHER
18	3		AN4-51A	BOLT
19	6		D2972	BUSHING
20	3		MS21042L4	NUT (OR MS21042-4)

* DENOTES THAT PART IS INCLUDED WITH D2966-041 ASSEMBLY.
** FOR REFERENCE ONLY. CUSTOMER SUPPLIED.

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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